EROSION AND SEDIMENT CONTROL PLAN CHECKLIST

*This Checklist must be completed and part of the Land Disturbing Permit submittal for review.

_____ Minimum Standards – All applicable Minimum Standards must be addressed.

- All Minimum Standards must be adhered to during the entire project, regardless of the phasing.
- Request for a Variance should be addressed.

NARRATIVE

_____ Project Description – Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.

- What time of year will the project start and finish? (construction sequence)
- How long will it take to complete the project?
- How many acres will be disturbed for the completion of this project?
- How much impervious area will the project have in post developed conditions?
- What will be the ultimate developed conditions of the site?

_____ Existing Site Conditions – A description of the existing topography, vegetation and drainage.

- Should list percentages of slope on the site.
- Types of existing vegetation that can be used as erosion control, or areas to be left undisturbed.
- Discuss marking of areas where existing vegetation is to be preserved.
- Discuss size of drainage areas in predevelopment conditions.
- Discuss any existing drainage or erosion problems and how they are to be corrected.
- Discuss orientation of slopes (north or south facing).
- Discuss how existing site conditions can be used to reduce the potential for erosion and how proposed E&S controls will be designed to "fit" the site.
- State how much area of the existing site is impervious.
- Photographs?

_____ Adjacent Areas – A description of the neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

- The potential for off-site damages must be considered and discussed.
- ANY environmentally sensitive areas should be mentioned.
- Other private or public lands adjacent to the site should be described and considered for possible problems during and after construction (traffic problems, dust control, increases in run off, etc.).
- Discuss perimeter controls to be used.

_____ Off-Site Areas – Describe any off-site land disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.). Will any other areas be disturbed.

- Any off-site borrow or spoil areas should have an approved plan to supplement the overall project plan.
- If off-site areas are under other permits, proof of permits should be provided.
- List specific locations of all off-site areas.

_____ Soils – A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.

- Indicate reference for soil information.
- Provide copy of soil survey map.
- Indicate what sheet of the site plan soils are delineated.
- Check for soils with a high K factor, or poor drainage, low pH, etc.

_____ Critical Areas – A description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, wet areas, streams, underground springs, etc.).

- Discuss any area of the project which may become critical during the project. Some areas of the site may have long or steep slopes during a certain phase of the grading.
- Indicate areas to be left alone until they can be graded and stabilized in favorable conditions.
- Discuss precautions to communicate limits of these areas to contractors and equipment operators.

_____ Erosion and Sediment Control Measures – A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should meet the specifications in Chapter 3.)

- List all controls used, list specification numbers (e.g. 3.02), and list the location of the practice.
- Discuss why it was selected.
- Sequence of installation, maintenance, and removal for each control.
- Discuss temporary seeding as a means of erosion control, list the types used.

_____ Permanent Stabilization – A brief description, including specifications, of how the site will be stabilized after construction is completed.

- Final stabilization needs careful review.
- Is the timing of seeding correct with the construction sequence?
- List soil testing requirements.
- Provide seeding specifications (pure live seed minimums), fertilizer and liming specifications. Seeding tables and rates.
- Discuss all other areas to be stabilized other than vegetation (gravel, paved, etc.).

_____ Storm Water Runoff Considerations – Will the developed site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control storm water runoff.

- Discuss how downstream properties and waterways will be protected (basins, channel improvements, easements).
- Discuss how increased runoff will be managed during construction.
- List or discuss all other references for design of permanent facilities.

_____ Calculations – Detailed calculations for the design of temporary sediment basins, permanent storm water detention basins, diversions, channel, etc.. Include calculations for pre- and post- development runoff.

- All calculations showing pre-development and post-development runoff should be provided. Worksheets, assumptions and engineering decisions should be clearly presented to assist the plan reviewer in his duties.
- Calculation methods should be clearly presented and organized.
- Have the calculations shown that adequate protection of downstream properties and waterways is provided?

_____ Maintenance – A schedule of maintenance for the permanent storm water control measure should be provided.

- Should list who is responsible during construction and who will be responsible once the project is complete.
- Should provide a schedule of inspections to be conducted.
- List maintenance items to check and perform as well as precautions for large storm events.

SITE PLAN

_____ Vicinity Map – A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

- Provide a reproduction of a topo map, road map, etc.

_____ Indicate North – The direction of north in relation to the site

- Useful tool for determining slope orientation.
- Useful for communicating written inspection reports and plan review comments.
- Useful in predicting areas off-site that might be effected by dust drift.

_____ Limits of Clearing and Grading – Areas which are to be cleared and graded.

- Show all areas to be disturbed on the site plan.
- Provide notes on how areas will be marked.
- Provide notes and illustrations to clearly indicate areas NOT to be disturbed.

_____ Existing Contours – The existing contours of the site.

- Should be shown as dashed light lines in intervals from 1 to 5 feet.
- Represent pre-development drainage areas (check these areas for accuracy).
- Show potential critical areas (slopes).
- Helps to determine cut or fill areas, low spots.
- Helps to determine if E&S controls have been designed properly.

_____ Final Contours – Changes to the existing contours, including final drainage patterns.

- Should be shown as heavy solid lines.
- Determines final drainage areas.
- Check to see if pre-developed drainage areas have increased.
- Check final grade of slopes to see if they become critical (may need diversions or flumes).
- Check vegetative specifications for final grade of slopes (low or high maintenance). Are erosion control blankets needed?

_____ Existing Vegetation – The existing tree lines, grassed areas, or unique vegetation.

- Clearly indicate existing tree lines, vegetation areas to remain, etc.
- Provide notes on the plan for areas to be undisturbed.

_____ Soils – The boundaries of different soil types.

- Indicate soil boundaries of all soil types on the site. List K factor and soil survey classifications.
- Provide notes of soil properties (texture, etc.).

_____ Existing Drainage Patterns – The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.

- Should indicate by acres and show the direction of flow for all existing drainage areas.
- Indicates the need for basins, traps or other structural measures.
- Helps determine if controls are designed correctly.
- Helps to determine if off-site drainage needs to be diverted.
- Useful in planning to break up drainage areas into smaller more manageable areas during construction.

_____ Critical Erosion Areas – Areas with potentially serious erosion problems.

- All critical, environmentally sensitive or prohibited areas should be denoted on the plan and notes to state reasons for critical nature.
- Stream considerations, temporary crossings, other permits, location of stock piles, trash & debris removal, fuel storage, etc.

_____ Site Development – Show all improvements such as buildings, parking lots, access roads, utility construction, etc.

- All improvements such as buildings, roads, temporary access roads, Right
- Utility improvements on and off

_____ Location of Practices – The locations of erosion and sediment controls and storm water management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of the VESC handbook.

- The exact location of all practices including vegetation should be clearly shown on the plan.
- A legend denoting the symbols, line uses and other special characters should be provided.

_____ Off-Site Areas – Identify any off-site land disturbing activities (e.g., borrow sites, waste areas, etc.). Show locations of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)

- Are separate plans required for off-site borrow or disposal areas?
- How will off-site areas be stabilized?
- Are there any temporary easements to be disturbed during construction?
- Who has final responsibility for off-site areas?

_____ Detail Drawings – Any structural practices used that are not referenced to the E&S handbook or local handbooks should be explained and illustrated with detail drawings.

- Details should be provided which are clearly dimensioned and reflect the ability to be "built" in the field according to the proper design criteria.
- Alternative E&S measures must have proper drawings to indicate how and where they are to be constructed.
- All plan drawings, elevations, and cross-section drawings should show scales used to prepare the drawings.
- Outlet Protection schedules should be provided.
- Sizes and materials should be shown for all pipes, flumes, and slope drains.
- All details should list the specification number from the VESC handbook.
- If more than one type of specification is being used (inlet protection) details of all practices shall be provided.
- Details for all structural measures (Silt Fence, Diversion Ditches, Construction Entrance, etc.) shall be on the plans.

_____ Maintenance – A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.

- Indicate who is responsible for maintenance and repair of all E&S measures on the project (RDL).
- Indicate who is the primary contact for emergencies, for notification of problems (owner), etc.
- Provide clean- and maintenance specifications for all major structures such as basins, traps, silt fence, etc...
- Require monitoring reports from the RDL if needed.